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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,003	08/27/2003	John B. Gunter	34822-00017	6047

7590 09/16/2004

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EXAMINER

PHILOGENE, HAISSA

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,003

Applicant(s)

GUNTER ET AL.

Examiner

Haissa Philogene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 and 20-29 is/are allowed.
- 6) ☒ Claim(s) 11, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 12, 13 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by
Lys et al., Patent No. 6,720,745.

As per claim 11, Lys discloses an LED based lighting system with thermal compensation capability, comprising: at least one LED array (644, Fig.22 or 1004, Fig.76) having same color LEDs (green, blue red), electrically connected to form LED channels (14, Fig.6); a microprocessor (16, Figs. 6 and 22 or 1002, Fig.76) connected to and independently controlling each LED channel (14) of the LED array to achieve a desired resultant color; a temperature sensor (1000, Fig.76) connected to the microprocessor (1002) for detecting an operating temperature of the environment containing the at least one LED array (1004); the microprocessor (16, 22, 1002) containing a lookup table readable as stored algorithm configured to cause the microprocessor to compensate for differences in the operating temperature of the at least one LED array (see Col.42, lines 21-24 and Col.43, lines 20-24).

As per claim 15, Lys discloses in Figs.27 and 33 the LED arrays (4006 or 4016) being installed as an transportation cabin lighting system, for example, an airplane aisle (see Col.34, lines 35-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lys et al.

Lys discloses the claimed invention substantially as explained above. Further, Lys discloses the temperature sensor (1000) being an IC separated from the microprocessor also an IC via a A/D converter. Lys does not disclose the temperature sensor being an on-board temperature sensor that is built into the microprocessor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the temperature sensor built into the microprocessor to form an on-board temperature sensor as both form of ICs, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

Allowable Subject Matter

Claims 12, 13 and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-10 and 20-29 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose a method of compensating for color variation due to temperature change in an LED based lighting system having at least one LED array, wherein same color LEDs are electrically connected to form LED channels having at least the steps of calculating a pulse width correction factor for the at least one LED

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channel based on the pulse width needed to achieve the predetermined target color at the at least first and second temperatures; and correcting the pulse width for the at least one LED channel using the pulse width correction factor to achieve the predetermined target color (claim 1); or at least the steps of deriving a temperature compensation curve for the LED array; and calculating a correction factor for at least one LED channel based on temperature compensation curve (claim 20); or at least the steps of adjusting an intensity level of at least one other LED channel until a predetermined target color is achieved; waiting a predetermined amount of time; readjusting the intensity level of the at least one other LED channel until the predetermined target color is achieved again; and storing the intensity levels of the LED channels as calibration intensity levels (claim 26); an LED based lighting system having, inter alia, the algorithm causing the microprocessor to at least calculate a temperature difference between the operating temperature and a calibration temperature and adjust the pulse width of the PWM for at least one LED channel based on the temperature difference (claim 12).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okuno, Patent No. 4,298,869, "Light-emitting diode display".

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 6:30 A.M.-6:00 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hp

Haissa Philogene
Primary Examiner
A.U. 2828
